

SUMMARY

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Stress Management for Healthcare and Humanitarian Workers Aiding in the Tsunami Relief Efforts

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*****Please note:** Data and analysis discussed in these presentations were current when presented. Data collection and analysis are ongoing in many cases; therefore updates may be forthcoming elsewhere on this website, through publications such as [CDC's Morbidity and Mortality Weekly Report](#) or other venues. Presentations themselves will not be updated. Please bear this in mind when citing data from these presentations.*

OVERVIEW:

On December 26, 2004, a strong earthquake with a magnitude of 8.9 on the Richter scale occurred on the west coast of Northern Sumatra, Indonesia. This resulted in a tsunami which hit Southeast Asia and East Africa, causing hundreds of thousands of deaths and widespread destruction of buildings, roads and power lines. The countries affected by the earthquake and tsunami are:

Sri Lanka
Indonesia
India
Thailand
Malaysia
Maldives
Burma
Somalia
Tanzania
Kenya

Relief assistance was organized immediately. However, humanitarian workers are at great risk for developing illness and injuries. These workers need to pay special attention to their mental health needs before, during, and after their time in the field. Today's topic is stress management for health care providers and humanitarian workers.

Our expert speakers today are Dr. Merritt Schreiber and Richard Klomp:

Richard Klomp is a health scientist who works on the CDC Disaster, Terrorism and Mental Health Team in the division of Violence Prevention in the National Center for Injury Prevention & Control.

Dr. "Chip" Schreiber specializes in the development of emergency psychological services for children in the wake of mass casualty disaster. Dr. Schreiber is a reserve officer in the U.S. Public Health Service Commission Corps, presently on assignment at the CDC here in Atlanta.

PART I: DEMYSTIFYING RESPONDER STRESS

Richard Klomp:

It has been a very positive experience for us here at CDC to do research and to take steps to improve the ability of individuals to carry out their missions related to the tsunami relief efforts. If you would look at your second slide, under *Goals of Today's Presentation*, **our focus is to demystify stress in responders**. We will spend a fair amount of time talking about:

what is anticipated to happen and what typically happens
the range of reactions
modifying inaccurate and maladaptive assumptions that people might have.

We realize that some of our listeners have deployed themselves, have spent time supporting people in the field, and may be very aware of the realities of field-related experience. But we realize also that some people might still be operating under some erroneous assumptions.

Our focus is to help each of us **build responder resilience**, both in ourselves or in those team members we might support. We want to have everyone in a position to either develop their own personal resilience action plan or help people whom they support do that same thing.

Assumptions

On the next slide, we highlight several of our operating assumptions. First is that **behavioral health issues are involved in virtually all aspects of preparedness, response and recovery**. While that might seem to be immediately clear to everybody, our experience has been that there have been times and situations when the behavioral

health aspects were not first in everybody's mind; when people were so focused on getting qualified, technically prepared individuals into the field that worrying about behavioral health was not at the top of everybody's list of things to do.

We also want to emphasize the fact that **resilience in responders is the norm**. While we will spend time addressing some of the issues that might arise -- that might impede individuals' personal or professional performance -- the data are quite clear that the vast majority of responders tend to respond in a positive and professional manner.

Many of us are familiar with the expression "stress is a normal reaction to an abnormal situation." That certainly is what we will talk about as we delve a little bit deeper into the tsunami response issues. And, of course, even though stress is expected and normal, it still can be a distressing situation.

I want to emphasize that mission success over the long haul is directly tied to responder:

- knowledge
- skills
- training, and
- resilience.

In other words, we can have the most highly qualified, best educated individuals in the world, but if they:

- are not able to work through their own issues,
- have not been properly prepared,
- are unclear about what they might encounter or how they can deal with the things that they do encounter,

then they are jeopardizing not only the success of their mission, but the effectiveness of their team along with their own physical and emotional well-being. Hence, our emphasis on helping people be ready to develop and implement their own personal resilience action plan.

Finally, in terms of assumptions, it's clear that **preparedness improves recovery**. It improves:

- the probability of mission success
- decreases the costs of stress to the individuals deployed, as well as those supporting them back at home
- facilitates a smooth reintegration back into their normal job, both in their homes and professionally
- minimizes loss of productivity.

I'd like to turn some time over now to Dr. Schreiber for explanation of the fourth slide.

Dr. Schreiber:

Findings from Responder Studies

I just wanted to review the emerging evidence base on mental health outcomes, behavioral health outcomes for responders, and very quickly highlight the three studies listed on this slide.

- The first study looked at **Oklahoma City firefighters** and their spouses after the bombing of the Murrah Building and basically found *very low rates of Post-Traumatic Stress Disorder (PTSD)*, which goes to the resilience idea that Rick just talked to you about, but *very significant issues with ongoing pre-event substance use*. Although clinical signs of disorder were not really found, spouses tended to almost universally view that their spouse/responder was very much changed by participating in the Oklahoma City rescue and recovery efforts.
- Another study looked at first responders after the **United Airlines crash in Sioux City, Iowa** and found *fairly significant increases in rates of post traumatic stress and mood symptoms* as well. The percentages are there for you to look at.
- The newest study, which actually appeared in the CDC journal *Mortality & Morbidity Weekly* in September 2004, is a study that looked at outcomes in **World Trade Center** responders 10 to 14 months after 9/11. And as you can see, they found *fairly significant levels of actual clinical levels of PTSD*. The interesting part of this study was they also looked at access to services. And you can see that before the study had taken place, even though about 13% were theoretically experiencing clinical levels of distress, only 3% of them accessed mental health services before the study took place.

An anecdote to reflect some of the reactions that you can have that aren't really clinical and aren't captured in the diagnosis, but are very real, is my own experience as a Red Cross volunteer and responder to 9/11 at LA Airport:

I had many things on the action list and I tried to write them down so I wouldn't lose any of them in my little spiral notebook, but I could never seem to find anything. I would look and look, and would probably pass over the thing I was looking for several times. With all the things that were going on, I wasn't able to process information in the way I might typically do so. So that was really my experience of the stress of being a responder.

Richard Klomp:

Unique Stress Factors in Mass Casualty Disasters

We're on the fifth slide now. Like many of you, I have worked in three different acute care facilities. We are very aware of the fact that healthcare providers are used to working in stressful environments. What we want to do at this point is identify some of the unique, unusual factors that might stretch even a seasoned acute care mental health professional.

The **unique and unfamiliar exposure** is something that is paramount in a lot of people's minds. You need to make sure that there's a **clear understanding of the emergency response culture at the local level**, both the Incidence Command System as well as the National Incident Management System, NIMS.

Many of the CDC tsunami responders were very seasoned, had done a lot of international travel, had even been around some situations where loss of life had occurred, but no one deployed from CDC was familiar with **catastrophic loss** of life and damage on this scale. Some of those deployed worked in mortuary settings, where there were in excess of 800 bodies at any given time. Just this massive loss of life is something that is different for virtually everybody involved.

There is a **sense of helplessness** with a tsunami; there's so little that can be done. And that's difficult for a lot of healthcare professionals who are used to taking action and making things happen. Of course, the death of children is particularly stressful to those of us who have children of our own or who spend time working with children. The condition of the bodies after this event was very different than what many of us are used to working with in typical trauma situations such as car wrecks and other injuries.

Then, of course, there are **cultural misunderstandings**. We felt that this cultural dimension was so important that we made arrangements on very short notice to bring in an expert from the West Coast who had grown up in the area affected by the tsunamis. This individual was able to provide us with information that we shared with the majority of our deployees.

The next slide (#6) that you're seeing is just demonstrative of the Californian wildfires. To us, it reflected some of the hellish conditions that healthcare professionals have to encounter when they are deployed.

The Nature of Traumatic Stress & Preparation for Deployment

Slide 7 addresses **the nature of traumatic stress** and shows a couple of different levels in terms of a *single event versus exposure over time*. One thing that we sometimes forget is that in an earthquake, a tsunami, a mudslide or wildfire, it's not just the initial event or impact that creates negative effects. Like a rock thrown into a clear pond, the initial event causes ripples that radiate throughout the community. Those ripples affect employment, schools, neighborhoods, and daycare arrangements. So we have multiple events, each of which can reinforce the initial trauma, and results in a series of emotional, as well as physical, aftershocks. And once again, just the sheer enormity of casualties and death and condition of bodies contributes to stress.

We had tried to spend time preparing several of our waves of deployed CDC staff for what they were going to encounter. In fact, we shared some fairly detailed information on body handling with some engineers who were deployed to work in one of the mosques that has been used as a mortuary. When I had a chance to visit with one of these individuals after he had been in country for about a week-and-a-half, I asked him if things were worse than he expected or about as he anticipated. He shared with me that it was pretty much

impossible for anybody to anticipate the enormity of the devastation that he saw. So many things were so far worse than he could ever have anticipated. However, he also said that some things were not as bad as he had anticipated. For example, he found some of the noxious smells were more tolerable than he had anticipated. So, there are just a lot of surprises out there.

We also have situations in traumatic stress when there are unique concerns related to infectious illness when we're looking at chemical, biological, radioactive or nuclear issues, because these dangerous agents are potentially invisible and difficult to detect with our senses. Of course, that was less of an issue relative to the tsunamis.

Exposure

On the next slide (#8), we look at five different features related to the dose of exposure in terms of:

- proximity
- severity
- duration
- dearth of literature on first responders
- "Compassion Fatigue"

Slide 9 focuses on **Compassion Fatigue**. It seems to me that the very factors that make healthcare providers effective at what they do puts them at greater risk for Compassion Fatigue. For example, the empathy that good floor nurses or good emergency room staffs have puts them at greater risk for experiencing Compassion Fatigue. Other risk factors include:

- severity and duration of exposure
- identification with victims and survivors
- similar traumatic experience
- unresolved past trauma
- working with special populations such as children
- baseline stress load.

In terms of "similar traumatic experience", one individual that we deployed worked in the mortuary area. When we collected a little bit of background information on this person, we discovered that the individual had lost a parent shortly before they were deployed. That's an example of something that we'd like to put into the equation and take into consideration when evaluating someone's risk of Compassion Fatigue.

Behavioral Indices of Stress

The **behavioral indices of stress**, listed on slide 10, shouldn't be a surprise to anybody. We just have listed a few samples of physiological, cognitive and affective symptoms that would be indicators of stress, for example:

- **Physiological**
 - fatigue

- insomnia
- dizziness
- nausea
- GI upset
- tics
- **Cognitive**
 - confusion
 - concentration problems
 - preoccupation with disaster
 - memory loss
- **Affective** (range of reactions and their duration):
 - anxiety
 - fear
 - grief
 - sadness
 - irritability

Sources of Stress

On slide 11, we identify **sources of stress for responders**. This is a slide that we share so that people can look at *specific things that can be done at home to minimize stress*. For example, **role ambiguity** is a huge issue for people who are sent off into the field, not knowing exactly what they're supposed to do. While it is very difficult to know beforehand what conditions people are likely to encounter, we certainly can give people a clear focus on what roles we expect them to fulfill to reduce that ambiguity that they experience.

Sometimes teams don't have a great deal of cohesion. Some organizations are able to deploy teams that have worked together previously. At CDC, we frequently pull individuals with very different levels of expertise from different centers who may not have worked together before, so **team cohesion** is a potential problem.

Discomfort with the unknown is another source of stress. Some people are much less comfortable than others in dealing with unusual situations. Some individuals are very comfortable accepting personal risk while others are distressed by that.

There's also a backlog of **accumulated stress** with acute stress of mass casualty response. And then there are **cultural issues**: some people are more able to adapt to cultural differences than others.

In terms of additional sources of stress for responders on the next slide (#12), **reentry home** is a huge issue. Not just **family** reactions to their absence -- family members who have missed responders very much can be upset with them when they return and with the fact that they're not responding exactly as they were pre-deployment -- but also **coworkers** who might have been less than excited at the prospect of picking up a deployed person's work. On the other hand, maybe nobody picked up their work.

There also are **empathic failures**, when coworkers and family members just don't have a clue about the situation that the deployed individual experienced. They might ask inappropriate and intrusive questions that cause distress.

Dr. Schreiber will discuss Slide 13.

Dr. Schreiber:

"Secondary Risk" in Responders

Now we're looking at the issues related to **secondary or vicarious risk** in responders. To some extent, "secondary exposure," or responder exposure, reactions are very similar to those of direct victims. Perceptual narrowing is often observed. Individuals are so intensely involved in the incident that their frame of reference shifts in such a way that they have difficulty seeing the "big picture." Also, viewpoints tend to become skewed toward one way or another.

The impact of the response experience superimposes on your existing stress level. When this new stress is added to your pre-existing stress level, you set the stage for **burnout**, which is something we're really working to reduce and avoid.

Empathy can be a double-edged sword. The extent to which you become open and available to others can place you at risk for your own negative reactions to events. Identifying with direct victims, special populations such as children, or having friends, family or colleagues that were somehow directly impacted can also put you at a slightly higher risk level.

Burnout

Slide 14 shows **other factors that contribute to burnout**, such as:

- professional isolation
- emotional/physical drain of continuous empathy
- ambiguous success (difficulty gauging success can lead to erosion of idealism)
- lack of expected rewards (can lead to disappointment)
- helpers who are also survivors
- belief in a socially modulated world
- continuous vulnerability
- comparing victims to family members

Sometimes the responder experience changes the way an individual views the world itself and that can be both a positive and a negative.

Post Traumatic Stress Disorder

One of the things that receives a lot of attention is **Post Traumatic Stress Disorder** (Slide 15). Post Traumatic Stress Disorder is, of course, a very important potential outcome, but it's not the only outcome. We have to keep it on the continuum of a range of possible outcomes. It's important to keep it in perspective along the way.

What does PTSD really involve? It involves **exposure to life threat** or **observed injury or death to others**. Three cardinal categories of symptoms are:

- re-experiencing
- avoidance
- numbing or increased arousal (startle response).

If one or a combination of these symptoms *last more than one month*, and *results in impairment of your ability to function* (a key point) in a family setting, with friends, or in your work roles, then PTSD may be a possibility for consideration.

Richard Klomp:

Programs for Deployed Responders

It is important to take all of the information that we've covered so far into consideration and try to apply it so that we can protect the people who are making a difference in the relief efforts. What we did at CDC, in an attempt to integrate this information, was to take a look at a **pre-event**, a **response**, and a **post-event** program for deployed staff.

Pre-Event

Even though we were deploying very seasoned, experienced international travelers, who had seen some fairly challenging kinds of developments in the field, we felt that even they could use an **overview of basic disaster mental health principles**. We covered:

- survivor needs and reactions
- reactions that might signal a possible need for additional mental health referral
- behavioral, cognitive and physiological responses and symptoms
- sources of stress for responders
- individual approaches to avoid and reduce stress
- examples of self-care that we will share with you towards the conclusion of our presentation today.

We also provided **specialized training**, as I mentioned earlier, for individuals who had particularly challenging assignments. For example, for the individuals who were going to be working directly with the morgue. We provided them with specific body handling training that discussed odors, visual images, and cultural issues related to some of the major religions that were present in the area.

We also encouraged people who were deployed to **build social support systems**, both in the field and to maintain a sense of connection with their family members at home. We

were pleasantly surprised that the majority of people who deployed from CDC on our tsunami relief efforts were able to stay in electronic and telephonic contact with their family members at home. That was, of course, huge in terms of social support.

The greater the **sense of mission and purpose** that deployed members have, the easier it is for them to prioritize, focus, and feel like they're making a difference. That can help a little bit with the sense of helplessness that we intimated earlier. The family communications plan that I mentioned earlier was also an important part on the pre-event side.

Response

In terms of response when people are actually in the field, we're in the rudimentary stages of developing and implementing a **buddy system** where deployed individuals would identify someone with whom they've worked in the past, someone with whom they had rapport. It preferably would be a peer; somebody who was in the same organization as them who could serve as a point of contact, a sounding board, and potentially a kind of concierge for their family members, if that was desired.

Now, of course, just like us, I'm sure some of your staff members who might deploy would love to have somebody helping their family members and some would say, "You know what, we've got it covered. We're self-contained. We don't need that." So you would look at this on a case-by-case basis, but it was certainly something that CDC tried to get up and running in a short period of time.

We tried to help individuals in the field **focus on the immediate tasks at hand** and we're constantly *monitoring their occupational safety, health and psychological well-being*. They were calling in on a daily basis to report not just the status of their work in the field, but also to do a brief update on how they were holding up.

Slide 15 addresses **knowing your own limits** in the field. We tried to emphasize ahead of time that while a lot of individuals in the healthcare environment have been very successful because they burn the candle at both ends, that if you're in a situation where your candle might get blown out, that's not helping you, your team, or the people that you're trying to help.

Post-Event

On the recovery side, we are trying to give people a chance to have a smooth re-entry. We're trying to give them an opportunity to **disengage**. We are actively collecting information about best practices, lessons learned, things that we can improve on next time around, so they have a chance to have a voice. That information will be shared at multiple levels within the organization. And we're making arrangements that individuals who desire **additional help and support** can obtain that.

Dr. Schreibner:

A Family Communication Plan

One of the things that seems very important for responders is to know that the family members left behind are safe and secure. Slide 16 outlines a little wallet card idea that some folks might consider that basically includes **emergency contact information** and a **family communication plan**. This is really important for the responder, so that he or she knows that family members all have plans -- and if there are children that the children and parent left behind have a plan -- and are then able to organize things should an event occur while the responder is away unable to help out. That's another concrete example of preparedness that enables a responder to feel secure in the knowledge that things are more or less managed at home. This card is available for those that want to download that on our Web site, which is www.nctsn.net.

Richard Klomp:

Maintaining Resilience & Self-care

Slides 17 shows some highlights from the **Road to Resilience** from the APA that illustrate the kinds of things that we've been talking about in terms of:

- making connections
- keeping relationships going
- avoiding the tendency to see crisis as beyond our control, as something over which we have no power or input
- accepting the fact that change is an integral part of living
- helping people move towards their goals, to take decisive actions.

Slide 18 talks about looking for **opportunities for self-discovery**. Some of our people who deploy wind up spending more time meditating when they're in the field, they spend more time exercising. They do some of those self-care things and it's an opportunity for them to make personal advances that might not otherwise be possible.

Of course, the flip side of that is they also are stretched and strained in ways that they would not normally experience, either. So I don't mean to give an unrealistically positive perspective of deployment. We encourage people to **nurture a positive view** of themselves, keep things in perspective, stay hopeful and positive, and take care of themselves.

Chip will give us a little bit more detail as to how we encourage people to do that.

Dr. Schreiber:

Other ways you can take care of yourself:

- **Minimize unnecessary exposure.** There might be opportunities when you are deployed to see more of the level of damage or see more injury, but we really think

it's important for people to monitor their own level of exposure to these things. If it isn't in your task, you may consider really reducing the things or events that you're exposed to.

- **Developing your own media plan.** Know when to turn off the news. I can tell you from my own experience on events that, for the first few times, it was very confusing to actually be on the scenes and then see them represented in the media. It was just not a good thing. My own personal strategy, which will vary for all of you individually, is not to watch any media at all when I'm in a response mode.
- **Monitor both your physical AND behavioral health.** Be aware of your stress level and the risk factors that you know you have. Maintaining your social support and active communication with your family are key.
- **Get the big picture.** Try to focus beyond the short-term to understand that many things are occurring over time. So you, again, have sort of a balanced perspective over time of what's going to occur.
- **Knowing your own unique stressors.** As you become involved in responses, you're going to learn that some things are more difficult for you than others. So you can develop in advance a situational awareness of things that may be difficult for you to handle and figure out a strategy to manage those.
- **Monitor your own red flags.** When you might need further assistance is going to vary by individual. It ties in again with knowing your unique stressors related to the event.

We really think it's important to understand that participating in these kinds of humanitarian and disaster health relief efforts are very, very significant events. They have both very positive consequences for all of us, and they also have some stressful consequences. Understand that it's a mixture of both of these that is to be expected and very normal.

Think about all the different coping responses that we've tried to outline today. Some of them are going to work for you, others probably not. Have a menu available to you as you sense that your stress level is going high. Maybe you have a red flag that's going off in your own coping ability; then you can select from that menu of coping resources and find one that works for you. Then continue to monitor your own stress level.

Richard Klomp:

Conclusion

Our concluding slide for today's presentation gives some specific examples at an individual level. The way that we shared this in our pre-deployment trainings, for individuals who were heading out, was to not insult anybody's intelligence by assuming that experienced people were unfamiliar with these things, but to actually have a dialogue with them and

ask, "What kinds of things have you done for yourself in terms of self-care -- physically, emotionally, mentally, behaviorally, or spiritually -- that have worked for you?"

Rather than having a lecture type environment, we just had a very good conversation. Individuals were able to say, "If I can get my 30 minutes of jogging or other exercise a day, I'm fine." Or, "If I'm able to stay in touch with my family members, I handle things better." So they were able to teach each other and therefore their suggestions carried a lot of credibility. It had a lot of impact coming from people who were deployed.

So we would just like to conclude by encouraging everybody to make sure that before anybody leaves, they are not only aware of this information, but that they really does create their own **personal resiliency plan** as mentioned. To ensure that the individuals have their primary responses, coping mechanisms, but also some backups in case they don't have access to the kind of facilities they need.

We have tried today to demystify stress in responders, to anticipate the range of reactions, to modify some inaccurate or maladaptive assumptions that exist, and to build a responder resilience program. Thank you for this opportunity.

PART II – Q & A:

Q: What are our lessons learned from 9/11 and can we adopt that knowledge for future catastrophic events?

A [Klomp]: I'd like to give you a couple of thoughts on that. I think one of the main lessons learned in terms of responders is the study that just appeared in the CDC MMR journal that shows that approximately a year later there can be some behavioral and mental health consequences for responders that were very active in the emergency response phase. So, the idea of developing a strategy around that highlights that this is a neglected area that really requires our attention as we're doing today. That's why we're so glad to be part of this call today.

Q: How do cultural differences of the tsunami-affected populations influence the mental health of the healthcare providers and the humanitarian aide workers?

A [Schreiber]: I appreciate that question. The cultural differences were something that loomed large to us when we first started looking at sending responders into the field. We addressed that a couple of different ways. One was by making arrangements to provide specific training relative to cultural issues of that particular part of the country. Another was to look for responders who had already demonstrated a facility with adapting to change and being able to communicate well with other individuals. These individuals were not necessarily fluent in the language, but they didn't come in with a prejudicial attitude, arrogance, or a lack of empathy.

So we were looking for individuals who had specific technical skill sets, but who also had some interpersonal abilities that would be conducive to gaining trust, building rapport with individuals whose backgrounds were very, very different from their own. So that is something that was taken into consideration.

We also tried to provide some information relative to behaviors that we should not engage in, so that we didn't offend anybody. Some of the religions in that affected area did not allow any westerners to touch bodies, so we tried to be cognizant of that to avoid offending anybody or engaging in any socially unacceptable behavior in that environment.

Q: In the context of lessons learned and efforts to continue to build responder resilience, are there plans for performing post-tsunami relief mental health assessments of healthcare providers and humanitarian aide workers to determine what similarities and differences there are in how each group handles stress?

A [Klomp]: I think it is very important to really integrate the behavioral or mental health consequences or reactions, and the health consequences that impact responders. I certainly think that those kinds of ideas are on many peoples' minds and strategies to enable that to be accomplished are currently underway.

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